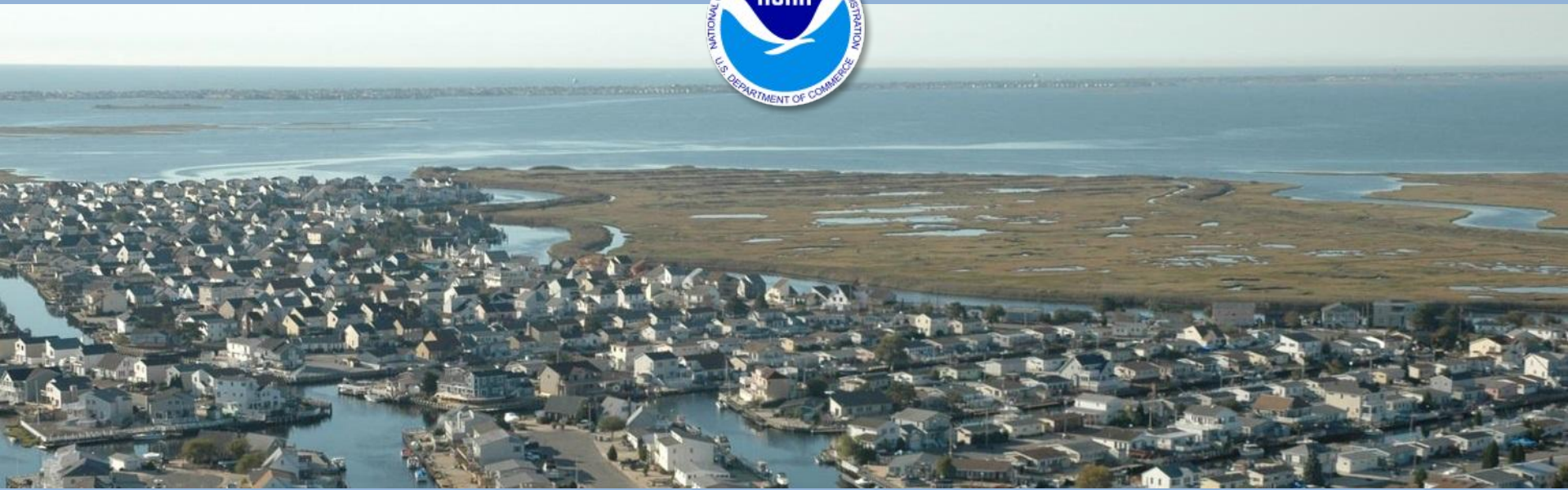


NATIONAL OCEAN SERVICE



OAR Climate Program Office Earth System Science and Modeling Division Workshop

November 7, 2018

Mark Osler

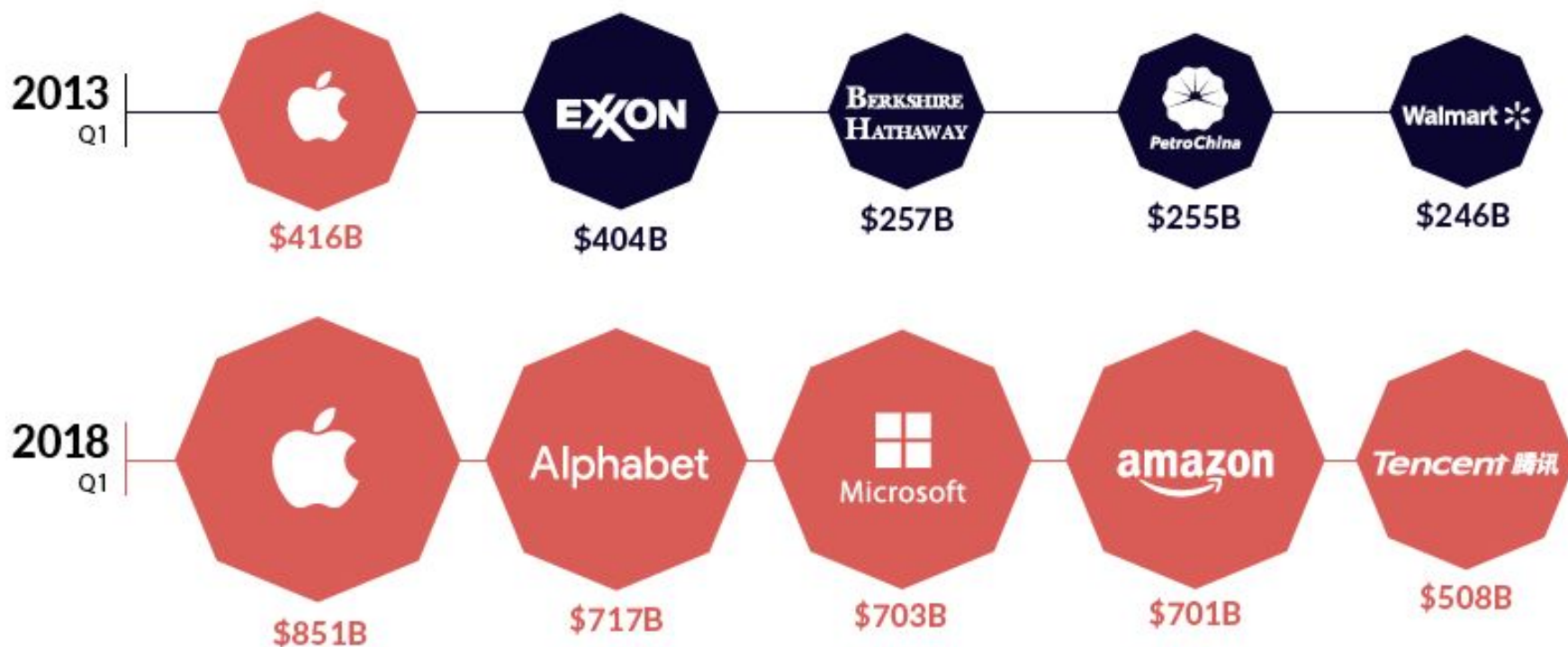
Senior Advisor for Coastal Inundation and Resilience



The Value of Data is Increasing

TOP 5 PUBLICLY TRADED COMPANIES (BY MARKET CAP)

 Tech  Other



Source: Visual Capitalist



PREPAREDNESS AND RISK REDUCTION

PLAN & BUILD

Develop and implement plan to prepare for disaster.



improving forecasts, observation models, computer systems



getting information to decision makers faster



incorporating green infrastructure



DISASTER STRIKES

Disasters can be imminent or strike unexpectedly.



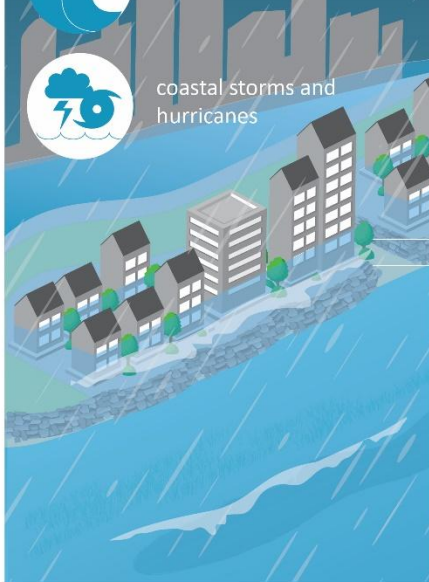
sea level rise



tsunamis



coastal storms and hurricanes



RESPOND

Immediately take action following a disaster.



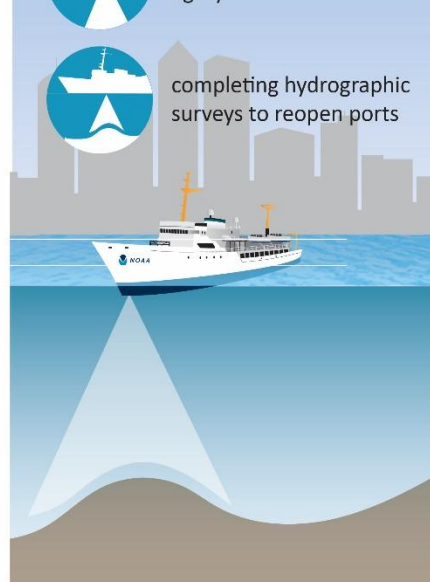
pollution response



damage assessment imagery



completing hydrographic surveys to reopen ports



RECOVER

Assess resilience and manage adaptively.



assessing damage to communities, economy, and environment



issuing grants to rebuild and restore habitat



providing data and tools for analysis



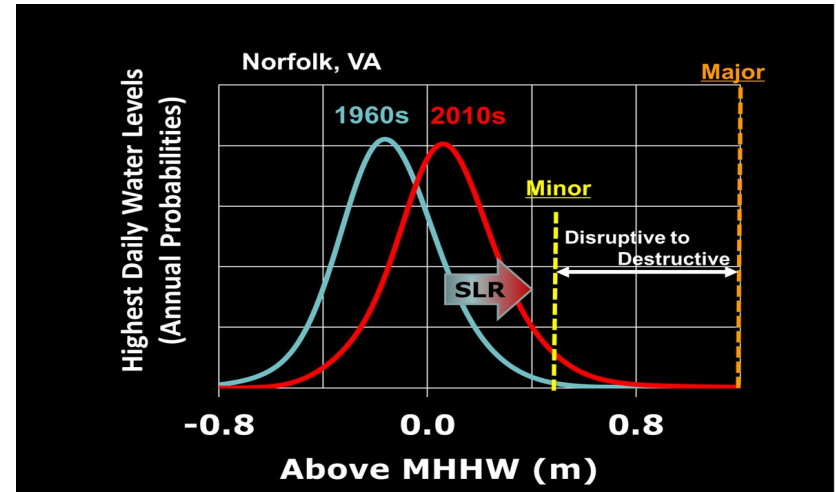
Assess and begin planning for the next disaster.



Coastal Flood Risks are Increasing

Due to Sea Level Rise (SLR) coastal flood risk of all severities is increasing.

To be truly resilient means planning for ever-increasing flood risk in the years to come.



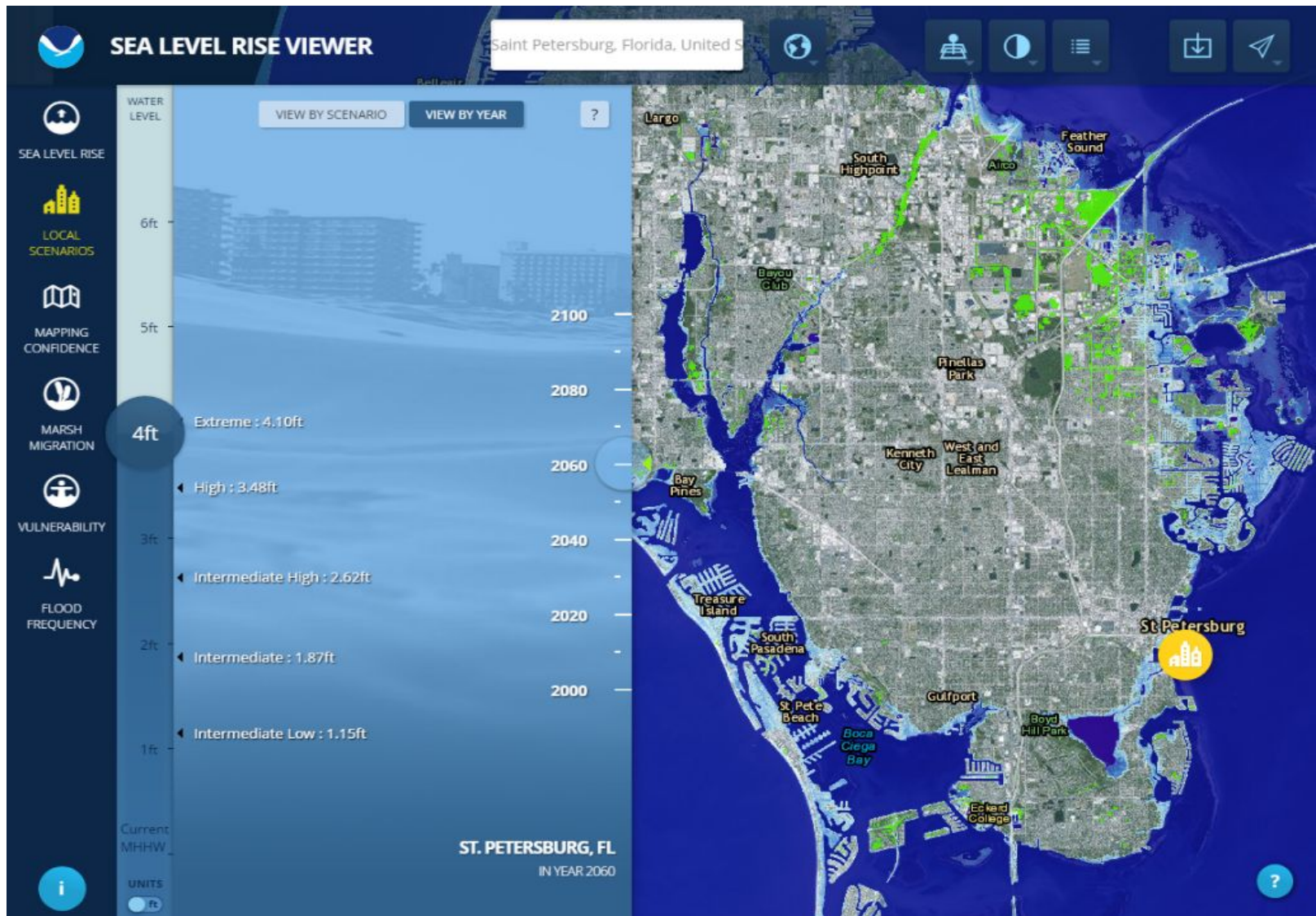
Coastal Flooding Thresholds

National Weather Service Wakefield, Virginia

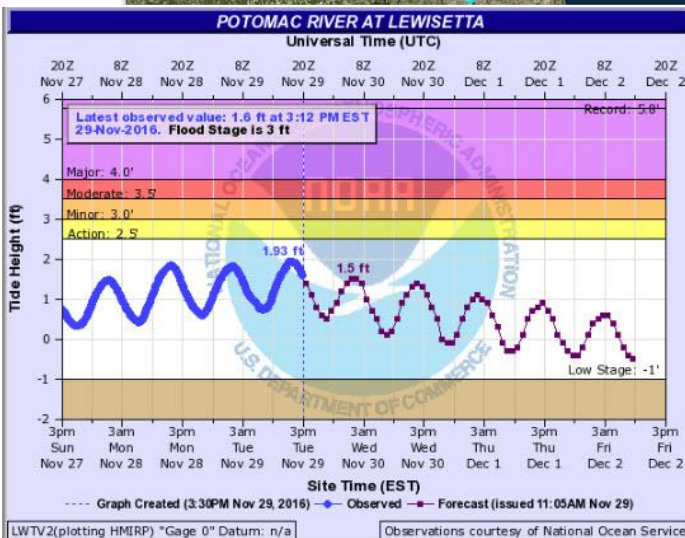
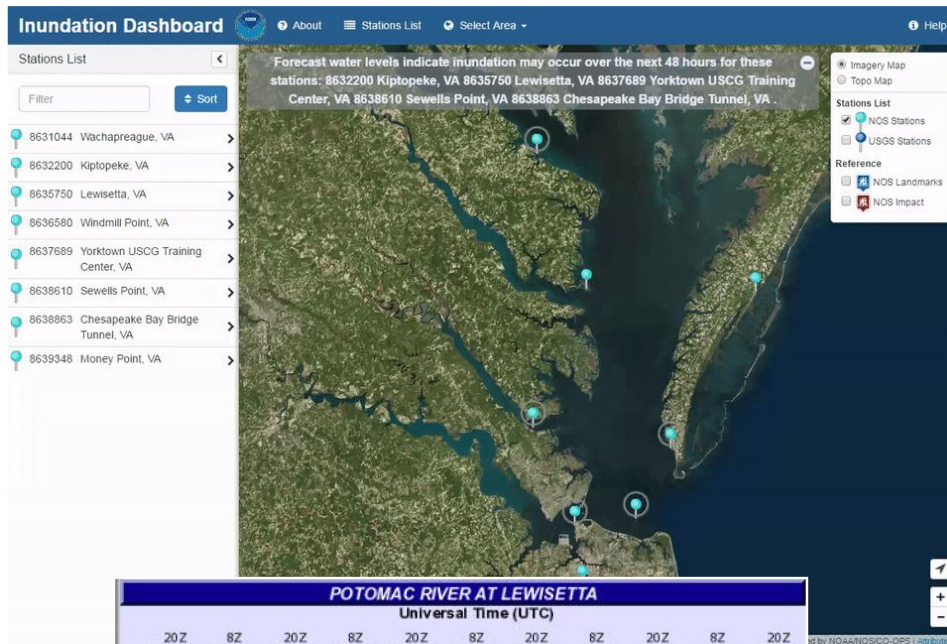
	Minor	Moderate	Major
Picture			



Sea Level Rise Viewer



Coastal Inundation Dashboard

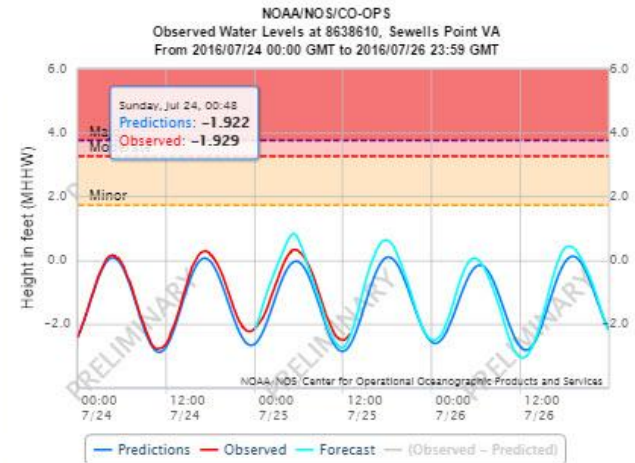


8638610 Sewells Point, VA

Flood Threshold: 1.75

Units: Feet Timezone: GMT Datum: MHHW

Present Water Level	-2.34	2016-07-25 12:48
Next High Tide	0.09	2016-07-25 18:06
Highest Today	0.83	2016-07-25 05:12
Highest Tomorrow	0.43	2016-07-26 18:30



[Inundation History Page](#)

[Station Home Page](#)

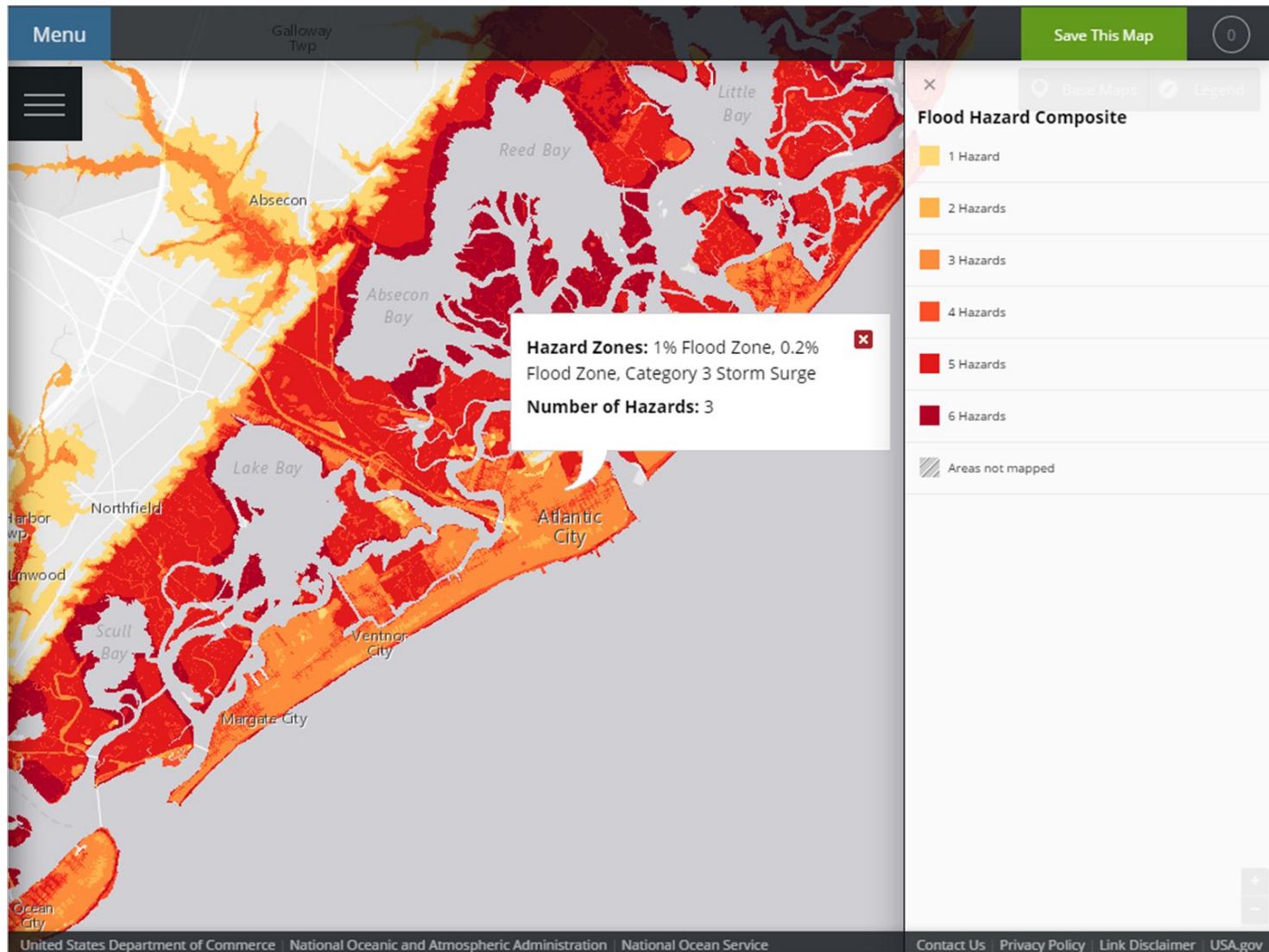
Close



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oceanservice.noaa.gov

Coastal Flood Exposure Mapper





Research requests from NOS

- R2O partner to NOS in delivering S2D predictive guidance of sea level and flood risk
- Model outputs w/ confidence bounds at a resolution relevant for site specific application - downscaling or native resolution
- Continued connection with cross-NOAA engagement frameworks like the NOAA Regional Integrated Science and Assessment (RISA) program and the NOAA Ecological Effects of Sea Level Rise Program (EESLR) which are community based
- Improved predictions of changes in species distributions due to climate change (especially important along the West Coast currents and warming trends in the Northern Pacific/Bering Sea/Arctic)
- Engagement with the new NOAA Gravity for the Redefinition of the American Vertical Datum (GRAV-D) initiative within the NGS Gravity Program to re-define the vertical datum of the U.S. by 2022. Improved elevation data will be used to increase protection against inundation from storms, flooding, and changes in sea level.

Thanks for asking!



